Floodplain and Drainage Advisory Committee

January 27, 2012 Meeting Notes

Committee Chair Frank Piorko began the presentation by welcoming all. He made mention of several new people present. Committee members now include Lew Kilmer as a replacement for Dave Baird representing the Sussex County Association of Towns. Christian Hudson is sitting in for Rich Collins who couldn't make this meeting. All present introduced themselves. Committee members present were: Kyle Sonnenberg, Sarah Keifer, Michelle Harel, Richard Sobota, Fred Mott, David Carlson, Michael Harris, Vince D'Anna, Bruce Jones, Mike Riemann, and John Garcia. Tony Pratt, Mike Powell, Greg Williams, Brooks Cahall, Bob Enright, Jim Sullivan, and Meghan Gloyd represented DNREC and David Athey and Gina Tonn represented DNREC's contractor Duffield Associates. Guests included George Haggerty, Jared Adkins, Kurt Brown, Mark Baker, and Keith Johnson.

Mr. Piorko stated that comments were received on draft standards and have been posted to the website. He gave a quick recap of previous meetings and said that comments will be taken from today's meeting and worked into recommendations. New ideas will be considered as well.

Mr. Kilmer said that he tried to get a handle on how extensive flooding is, especially in Sussex County. He got information on the number of flood insurance policies held. Bethany has 2,000, Lewes 1,000, and Delmar four policies. He is concerned that towns that don't have flooding issues will be negatively impacted. One size fits all may be too broad.

Mr. Powell said that flood insurance questions have come up as a way to get a handle on the extent of the issue. Mr. Powell and Mr. Williams have also gotten information from FEMA. This information is to be handed out and posted on the website.

Mr. Sobota said that the biggest driver of insurance is the mandatory purchase requirement. Properties without mortgages are not required to obtain coverage even if in high risk areas. The flood insurance program only captures information about claims paid, and flood damage is not on FEMA's radar if they don't have insurance.

Mr. Powell said that DNREC is attempting to see if the existing standards are adequate. They sorted all the claims data since 1978 into Pre-FIRM and Post-FIRM. The handout showed the Post-FIRM data summarized by year and by communities. The last page included summaries of pre-FIRM versus post-FIRM claims data.

Mr. Hudson stated that on the data that was passed around, it is indicative of significant work in the regulatory environment and advancement in code. A lot of the problems are handling themselves. Mr. Sobota replied that there is a short duration of claims data. The program is based on a 100-year cycle of events. Short-term figures can be misleading. Mr. Hudson said that even so, it shows significant improvement based on the regulations in place.

Mr. Athey introduced the presentation. Duffield Associates came up with themes to develop the draft standards to engage everyone in dialog. He noted that input as to whether the presented direction is correct is welcome. For some standards alternates are included. Consensus is not

being sought this morning and the list can be whittled down as appropriate. The first draft standard for Floodplain Mapping and Data Scenarios was introduced by Mr. Athey and pertained to Non-delineated Floodplains.

Mr. Riemann asked for clarification of what a non-delineated floodplain is. Mr. Powell explained that a non-delineated floodplain is a stream where FEMA never attempted to map the floodplain. For example, Hyde Run in New Castle County is a non-delineated floodplain. Mr. Riemann asked if there is local data available for non-delineated floodplains. Mr. Powell replied that that is the dilemma. Mr. Riemann said that he thinks DNREC or FEMA should map these floodplains.

Mr. Hudson said that the onus is being put on the landowner. For consistency, information should not be pieced together and one map would be better. Mr. Athey replied that FEMA funds are being cut and it is unrealistic to think that all non-delineated floodplains will get mapped by FEMA. Mr. Powell added that he would be shocked if DNREC ever got the point of all floodplains being mapped with FEMA funds. Mr. Piorko said that DNREC currently has \$700,000 from FEMA for mapping. DNREC is trying to leverage \$500,000 of State money. There is no guarantee of sustainable funding in the future. Funding needs to be prioritized but there still will be unmapped floodplains. A threshold needs to be discussed.

Mr. Riemann said that he's concerned about how the threshold would be determined. Would there be some trigger? What if there's no floodplain information available but a property is adjacent to a stream. This could lump in lots of properties.

Mr. D'Anna said he is concerned looking at the numbers on insurance claims. If the government would invest the premium money that Delaware doesn't get back in flood insurance claims into mapping, he thought that could take care of the problem.

Mr. Garcia said his firm performs these studies in non-delineated floodplains in New Castle County. If a home is in a non-delineated floodplain are they required to get insurance? He's also concerned about consistency statewide. Who would do the reviews? There is a difference between New Castle County and Sussex County.

Mr. Jones asked if there will be a standard for flood studies statewide or county by county? Mr. Garcia asked if there was a statewide standard, would it make sense to have one state agency do the reviews? Mr. Jones noted that there may not be qualified individuals in each agency to review flood studies. Mr. Piorko added "or a qualified consultant".

Mr. Hudson said that he's concerned with consistency. New Castle County has different types of flooding than Sussex County and the Committee needs to be sensitive to the differences. There isn't flash flooding in Sussex County like there is in New Castle County.

Mr. Athey asked if the standard is going in the right direction. Is it reasonable to mandate at a certain threshold?

Mr. Morrill stated that there is an issue with having property owners do the mapping. Is there a size impact here? There may be a better way than having individual property owners pay for the mapping which results in the job being done piecemeal. Mr. Piorko replied that it is likely better to do on a watershed basis. He doesn't know what the threshold is. New Castle County tied

their studies to blue line streams. DNREC may need to look at other jurisdictions to see what they're doing.

Mr. Riemann asked if a flood study would be needed for a six acre lot adjacent to a blue line stream. Mr. Piorko replied that there is some interest in discussing the size of watershed or correlation between the number of units. The discussion should be whether these are good ideas and the Committee does not need to figure out the numbers right now.

Mr. D'Anna stated that it has been 38 years since the beginning of the flood insurance program and this is the responsibility of the government. The government should define the floodplains. Mr. Athey replied that this is a philosophical versus practical conversation and that reliance solely on a government entity will result in voids. DNREC and the Federal government will not map the entire state's floodplains. Mr. D'Anna replied that they at least need to have a sense of priorities. Hyde Run has lots of flooding.

Mr. Powell said that DNREC is buying two houses in New Castle County that were damaged beyond repair in non-delineated floodplains. Flooding problems can be severe in non-delineated floodplains.

Mr. Hudson noted that looking at Recommendation Number 10, DNREC shall make it a priority to seek funding for updating maps. It is DNREC's duty to make a request for mapping funds. Mr. Piorko said that DNREC agrees. The question is that there are other considerations that can happen at the same time. Are there other alternatives? Mr. Hudson agreed. He understands these things will take time. He asked if a request has been made and what is the process to make a request to FEMA.

Ms. Harel said that FEMA would map everything if they could but they don't have land use authority. Based on the data they have they need to make smarter decisions moving forward. Until unmapped areas are mapped, they need to be protected.

Mr. Morrill asked if when flood studies are done they have to be signed off on by FEMA. Mr. Powell replied that if a request is made to FEMA, then it needs to go through the LOMR process. He understands that a FEMA request is not always made for non-delineated floodplains.

Mr. Haggerty said that in New Castle County requests will be sent to FEMA. The problem is when a structure is put close to a floodplain. Is establishment of a BFE important? Often, somebody is trying to take the existing use of a property and change it. If someone wants to build a house, he believes the BFE should be established.

Mr. Piorko noted that the discussions are moving on to the next topic and that folks may want to submit written comments.

Mr. Kilmer asked Ms. Harel if someone can get flood insurance without being in the floodplain. Ms. Harel replied that flood insurance is available to anyone in a participating community.

Mr. Athey introduced standards for the second category under Floodplain Mapping and Data Scenarios regarding activities in areas with Delineated Floodplains but no Base Flood Elevations (BFEs) also known as Zone A. Mr. Powell added that the differences between this and the last scenario is that here there is already an NFIP requirement that BFEs be established under certain

thresholds. Mr. Athey noted that the current regulations are not very prescriptive and the proposed standard is intended to raise the bar on how BFEs are determined.

Mr. D'Anna said that with limited funds, improving Zone A maps should be a priority. There must be some history that indicates that a floodplain should be delineated.

Mr. Hudson asked how many watersheds are there in Sussex County? Mr. Cahall replied that every point is in a watershed. Isolated areas sometimes don't have an outlet and that's a drainage issue.

Ms. Harel asked what the recommendation was about the 5 acres / 50 lots standard. Mr. Powell said that there is a recommendation that the level be changed. Ms. Harel said that FEMA's focus is to have a study done for large scale development to see what the impacts of that development are on the floodplain and adjacent property. Safety is the issue since development affects neighboring communities. Mr. Morrill said that the discussion is not about unmapped floodplains but those without BFEs.

Mr. Powell said that tidal floodplains have all been mapped in Delaware. The basic function of a floodplain map is to identity high risk areas versus low risk areas. This allows the floor level to be high enough, which is not possible without BFEs.

Mr. Riemann said that in Kent County, there is language in the code on how to deal with this. There are two options: a flood study or the point on the boundary method. It is up to the builder on whether or not to spend the money on a flood study. In his opinion, this has worked well.

Mr. Powell said that the point on the boundary method has created problems. If a point on the boundary is determined in a Zone A (taken from old 1960s era USGS topo maps), this is from a blob on a USGS map that was not ever intended for a 100 year storm. Mr. Riemann added that the Zone A maps aren't very good. New Castle County made a decision that a flood study makes sense for them. This is shifting costs from one entity to another.

Mr. Piorko said that the Committee should be looking at two things consistently: 1) the risk to occupants and 2) alterations to floodplains. Is there a size or threshold to require a study? If consensus is that this is too expensive, impacts to a watershed still need to be thought about.

Mr. Hudson said that safety is a primary concern. Insurance is lucrative with premiums in the 10's of millions. The payouts are minimal. It is in the best interest of government to promulgate this and to expand coverage areas. There should also be talk about reducing coverage. Mr. Athey replied that in discussions at a previous meeting, it was noted that it would only take one Katrina in Delaware to remove the surplus. Mr. Sobota added that non-federal sources of insurance are available. If it were truly profitable, non-federal sources would step in. Delaware has been very fortunate so far. Mr. Morrill said that insurance rates are not based on payouts versus premiums.

Mr. D'Anna asked if there is a program to map areas following storm events. Mr. Powell replied that high water marks are sometimes mapped. Mr. Piorko added that this was done on the Inland Bays most recently. All that does is assign a value to risk folks already have. Ms. Harel said that post-disaster teams go out and map high water marks. Mr. D'Anna said that in Newark on July 5, 15 years ago there was a flood. Is that reflected on the flood maps?

Ms. Harel said that FEMA requires minimum standards and encourages communities to go above and beyond. Communities have a role to play.

Mr. D'Anna asked if anyone records or marks water marks during or after a storm event. Is there a program? Mr. Athey said that the problem is in determining what level of storm an event is. Mr. Jones said that the floodplain is just a statistical calculation and it would make sense to use high water mark data if there was certainty about a storm event. Maybe could use the data in non-delineated floodplains or Zone A. Mr. Riemann added that the lines aren't very good in Zone A's and that high water mark data might be better.

Mr. Powell said that if the options are a point on a boundary or using storm event data, he'd rather see the use of storm event data rather than the point on boundary method. There was a comment that there are a lot of premiums paid and lesser amount of claims. In Zone A, getting BFEs on maps before building can save lots of money in premiums to homeowners. Mr. Hudson asked who should be doing maps? Mr. Piorko asked if the 5 acre / 50 lot standard is good? How should it be done?

Mr. Jones asked what would be the method for establishing BFEs? Can risk thresholds be identified and have lower standards in different areas and require H&H studies for higher risk areas?

Mr. Haggerty said that people are building houses and in five years they flood. How do these people get protected? New Castle County is trying to make sure what they build has some reasonableness and understanding that hydrology is going to change. In Glenville, they'd been there for 50 years and then a rain event wiped them out.

Mr. Riemann said that rules and regulations already exist but not everyone likes the rules. Buffers from blue line streams exist. Should regulations be at the DNREC level or at a County or municipal level? Using broad brush standards can create a huge cost. Mr. Athey noted that there are recurring and underlying cost versus risk themes with the morning's dialogue.

Mr. Sobota said that means of reducing uncertainty is desirable. Rates become lower with more certainty. Rates are high in Zone A because there is less certainty of risk. Conversely rates are lower in Zone AE because there is a higher certainty of risk. From an insurance affordability perspective, better / more information equals lower rates. This is all about life and human safety.

Mr. Piorko stated that the discussion was moving into standards for Development and Building Scenarios topics now. Mr. Athey briefly introduced the third topic of standards under Floodplain Mapping and Data Scenarios pertaining to Delineated Floodplains but noted these were essentially covered in the ensuing standards for Development and Building Scenarios.

Mr. Piorko said that in the comments received so far, no one was in favor of the adjacency issue. Adjacent can be a nebulous term and will not be further considered.

Mr. Kilmer said that in Bethany Beach, there is no freeboard requirement but new construction usually has freeboard with a minimum of a 30 inch crawl space. He's reluctant to make a rule, and with grandfathered properties, non-conforming properties could be created.

Mr. Hudson said that this should be left up to towns and municipalities. Land configurations are different in New Castle County versus Sussex County. Mr. Athey asked what happens if municipalities have no or low freeboard. Whose pockets do damages / buy-outs come from?

Mr. Hudson said that if adequate mapping exists, the threshold should be up to municipalities. This is about the rights of towns and counties versus states. It is in DNREC's best interest to avoid litigation and avoid this issue. Mr. Piorko said that the process is to make recommendations to the Secretary. There will be a process for public comment. Municipalities will then review the draft standards in light of their ordinances. Mr. D'Anna said that we got here because a lot of communities don't have good standards.

Ms. Harel said that Pennsylvania has a 1.5 foot freeboard requirement. This is one of the best standards to protect communities and reduce insurance rates. She strongly recommends it. Mr. Piorko asked why isn't freeboard the FEMA standard. Ms. Harel replied that freeboard is rounded up and generally increases savings in insurance premiums. Mr. Sobota said that the FEMA standard is the 100-year event, mandated by Congress. A standard should be higher than the 100-year event. He recommends freeboard. Mr. Piorko asked if freeboard should be included in the recommendations.

Mr. Hudson said that in SB-64, the committee ultimately submits recommendations to the Secretary. In line 54, all counties and municipalities shall adopt. Mr. Piorko replied that Mr. Hudson was looking at an old version of the legislation. The wording changed subsequently.

Mr. Morrill asked why freeboard should be arbitrarily set. The cost associated may vary from community to community. Mr. Powell replied that examples of why freeboard is needed were shown at prior meetings. Fill is allowed in floodplains that can push flood elevations up one foot. With no freeboard, there could be one foot of water in a house due to encroachment in the flood fringe. Many streams were mapped 10-20 years ago before NOAA increased the 100-year rainfall estimates. Building at the BFE will allow quite a bit of damage to occur if water reaches the first floor of a house.

Mr. Athey said that there is a dollar value savings in premiums if a structure is built with freeboard. Ms. Harel added that this was discussed at previous meetings. Mr. Williams quoted the handout from the October 26th meeting showing that for two foot freeboard at an average structure, the annual premium is reduced from \$726/year to \$358/year resulting in a savings of \$368/year. Mr. Athey said that over a 30 year mortgage, the freeboard could pay for itself.

Mr. Piorko stated that there is a range of views on whether or not a freeboard standard makes sense statewide. Mr. Jones asked shouldn't enough information be given to the group to make a decision on the amount of freeboard. Mr. Carlson said that he did a presentation at the Sea Level Rise Committee meeting. He supports 1.5 foot freeboard. On the Inland Bays, many homes are below BFE. When doing home elevation projects, the extra freeboard requirement could negatively impact the benefit / cost analysis and disallow some grants.

Mr. Sobota said that NFIP reform is a hot topic at FEMA. Soon the NFIP and FEMA will be less and less involved in providing resources. Responsibilities are going more to states and local communities. There is suggestion to get away from the NFIP and insurance rates from private insurers could be three times higher.

Additional standards related to Development and Building Scenarios were presented by Mr. Athey. Mr. Piorko requested that everyone think as if the maps were adequate so the Committee could now focus on fill in the floodplain, etc. He solicited thoughts on fill/encroachment in the floodplain. Mr. Sonnenberg said that he doesn't understand allowing building in the floodplain that hurts other property owners. It should be a fundamental consideration that something that causes damage to others should not be allowed.

Mr. Hudson asked if there is information on how much fill equates to the 0.1 foot threshold. Mr. Piorko replied that 0.1 foot is just one measure. Sometimes no measureable impact is used. When developing multiple properties and each property has no measureable impact, there may still be a cumulative impact. Mr. Morrill agrees with limiting the fill restrictions to non-tidal areas.

Mr. Kilmer said that most coastal communities are pretty well built out. There is a lot of construction in existing floodplains and building in floodplains with either new lots or taking down existing structures shouldn't be prohibited. A lot of rules are in place, but to prohibit is too strong. Mr. Athey replied that there have not been motions to outright prohibit development in floodplains.

Mr. Morrill asked if studies could be done on a watershed basis with a possible tie-in with stormwater work. There could be different standards depending on where a project is in a watershed. Mr. Piorko said that everyone needs to recognize and be cautious that less risk is not assigned to homes on already recorded lots. Already recorded lots are those that are not built and those that are not recorded yet.

Mr. D'Anna said that for grandfathered / already recorded lots, some consumer notification could be done. Home buyers could be educated and the real estate association can help with that.

Mr. Piorko said that for large properties, analysis on downstream impacts is done. Is DNREC in a position to discuss incremental changes to a watershed when 200 already-recorded lots in a watershed are allowed to be built without understanding the impacts? It's assumed that cumulative fill is causing an impact.

Mr. Hudson said that this speaks to prioritization of the FEMA map updates. Streams to be affected by development on paper lots should be studied and map updates can better manage downstream consequences. Mr. D'Anna said that in watersheds with problems, like 500 paper lots, detention requirements should help.

Mr. Piorko said that terms to allow risk were being discussed and if allowances for building above the BFE have not been made, people are being put at risk. Mr. D'Anna said that as a realtor, if he sells a house and there is information out there about flooding, he needs to inform the buyer.

Ms. Harel said that she was responding to Mr. Hudson. Even if the risks are known, going above and beyond may be good. Mr. Hudson replied that the BFE has to be known to set houses appropriately. Paper lots are a completely separate issue and building on these lots cannot be disapproved. Mr. Piorko said that standards can be applied to those paper lots.

Mr. Haggerty said that there are problems getting mapping funded. Assuming BFEs are known, what should be done with the information?

Ms. Gloyd asked if the BFEs assume a level of build out. If a level of build out was assumed, the maps wouldn't need to be changed. Mr. Powell said that the BFEs in Delaware are based on a snapshot in time at best a few years old.

Mr. Kilmer said that his town uses the Sussex Conservation District for reviews. A lot of agencies are capable of assisting developers to make sure plans are viable. Mr. Morrill said that this is another argument for watershed studies to include recorded lots. Mr. Powell said that ideally there would be two separate sets of maps. For development, developed conditions would be included. For insurance purposes, present conditions are needed because rates have to be based on current risk.

Mr. Morrill asked why fill is being required in standard #4. Mr. Powell replied that that is not the intent and Mr. Athey said the wording would be revised to clarify. In some cases, land is elevated, removed from the FEMA floodplain, and no construction standards are applied. Mr. Pratt said that Standard #4 as written would infer that more than 18 inches of fill would relax standards. How would a beach fill project apply? Mr. Powell said that FEMA doesn't allow fill in a V Zone to change the maps. It's different in A Zone. Mr. Pratt asked if erosion should be considered part of the equation. Mr. Powell replied that under the current FEMA regulations if a little bit of fill is brought in to raise the grade to the BFE then all standards get thrown out, i.e. basements could be built on a lot that was initially in the floodplain. The spirit of the draft standard is to require that these areas meet the freeboard requirements or at least not relax the current floodplain standards in areas filled to a few tenths of a foot above the BFE.

Mr. Kilmer said that developers sometimes are clearing full lots and taking trees away in order to place fill. He doesn't want them to clear a lot to meet requirements.

Mr. Hudson said that this is a property rights discussion. If land is in the floodplain, what abilities should be allowed to retain? The Committee should be very mindful of "takings". What do requirements mean in the real world? What is encroachment? Mr. Athey said that a principle issue being looked at is that problems should not be created on an adjacent lot.

Mr. Piorko said there is a tidal versus non-tidal issue. Folks should comment on whether the standards apply the right level of protection. Maybe some information should be given regarding what's happened elsewhere in other states and in-state, including what applies to Delaware, and what's working. Mr. Athey added that there is an ASFPM guide with some suggested standards.

Mr. Powell said that New Jersey uses a 0.2 foot height for encroachment which results in streams with wider floodways with narrower floodplains. This widens the area that can't be filled or encroached in. Mr. Jones said that it would be good to have perspective on what others are doing.

Mr. Hudson said that standards depend on when filling was done and if there has been past encroachment. Mr. Powell replied that the standards that are being proposed don't impact previous construction. Mr. Athey added that there are FEMA standards on substantial renovation.

Mr. Piorko asked are there thoughts on whether recorded versus unrecorded lots should be treated differently? Throughout the State, there are varying degrees of standards. Some standards say that a lot of record can be built in the floodplain but that no new lots may be subdivided in the floodplains.

Mr. D'Anna asked doesn't FEMA have standards that prohibit building in a floodplain? Ms. Harel replied that FEMA just restricts building in the floodway.

Mr. Morrill said that in some building codes, if a lot is recorded, structures could be built even if the floodplain changes in the interim. Mr. Powell said that structures based on a previous flood elevation can't be approved and built. FEMA requires building to current standards even if a subdivision was approved previously.

Mr. Hudson said that building codes change all the time. It is up to municipalities to accept a certain building code. Sussex County still uses the 2007 International Building Code.

Mr. Morrill said that the conclusion is that construction in the floodplain on a previously recorded plan can't be prohibited but the current floodplain standards could be imposed. Mr. Haggerty said that for a plan previously recorded in 2000 and built in 2012, New Castle County could rely upon the old flood elevation but Mr. Powell replied that that's against the FEMA standards. Mr. Haggerty clarified that the County would use newer or current information.

Mr. Haggerty said that the flood elevation is established by the recordation of the plan. The chances of that occurring are relatively small. In Port Penn, there are plots of record in the floodplain. They go through a public process and building standards are applied. They don't stop them from building, but make them build to a different standard.

Mr. Kilmer said that he attends Sussex County Council meetings and the ag community is very vocal on property rights. The Committee needs to be careful of that.

Mr. Riemann said that if a subdivision is recorded and FEMA remaps with new elevation, the county won't take away the right to build, but the standards will change. Ms. Harel replied that FEMA sees this a lot. Often communities know ahead of time that the elevations will be changing and can encourage developers to use new data.

Mr. D'Anna suggested that a recommendation be made that new standards apply to recorded lots. Ms. Harel said that FEMA says to use "best available data". This may not be the effective floodplain map.

Mr. Haggerty said that in New Castle County, a change in flood elevations / lines will probably be caught through a lines and grades review. He asked what kind of review is done against a changed map in Kent and Sussex Counties. Mr. Powell replied that Kent and Sussex Counties would require an Elevation Certificate to be filed at the time of the Building Permit Application. The permitting staff would catch the change.

Mr. Hudson said that for mobile homes in Rehoboth Bay, there are elevated homes right next to homes right on grade. New homes are built about chest high above grade (above water level). There is a regular inspection that occurs.

Mr. Piorko opened the meeting up for public comment.

Mr. Brown spoke about his home on an island at the edge of the floodplain on the Nanticoke River, on Concord Pond. He has an issue with the operations of the pond dams by DelDOT and DNREC. Mr. Piorko replied that this is an unresolved dam safety issue and isn't pertinent to this Committee's topic.

Mr. Brown asked if FEMA cover flood losses if DNREC caused the flooding. Mr. Sobota replied that yes, FEMA would pay the claim.

Mr. Johnson asked if this committee votes on anything and what the timeframe is for the process. Mr. Piorko replied that it may take three more meetings to formulate consensus. An April meeting may be needed. Mr. Johnson asked when the process will be done. Mr. Piorko replied that a report needs to be delivered to the General Assembly in March 2013.

Mr. Piorko asked if the Committee should try to structure meetings based on the need for a 3rd meeting. Mr. Morrill replied that he thinks a 3rd meeting will be needed.

Mr. Piorko said that in February more comments from folks will be heard. The draft standards will be reshaped and reframed into what might look more like recommendations to the Secretary. Between now and the end of February comments will be shared via email. Meeting notes and presentations will be sent out.

Mr. Powell said that he and Greg Williams would meet with anyone who needs perspective or technical assistance in understanding the issues.

The meeting was adjourned at 11:55.